

Amendments to the Claims

The following listing of claims will replace all prior versions and/or listings of claims in the application:

Listing of Claims:

1. (Currently Amended): A method for detecting and reporting ~~an~~-in-flight alert conditions of ~~an~~-a plurality of aircraft using a computer system, comprising:
 - monitoring one or more flight characteristics of the plurality of aircraft with the computer system, wherein the computer system is not on-board any of the plurality of aircraft;
 - comparing at least one of the flight characteristics to one or more normal flight characteristics to assess an alert condition of at least one of the plurality of aircraft with the computer system; and
 - reporting the alert condition of at least one of the plurality of aircraft with the computer system.
2. (Currently Amended): The method of claim 1, wherein the alert condition comprises an alert level of at least one of the plurality of aircraft corresponding to a danger level or threat level of the aircraft based on at least one of the flight characteristics.
3. (Original): The method of claim 1, further comprising changing the alert condition when at least one of the flight characteristics deviates from at least one of the normal flight characteristics.
4. (Currently Amended): The method of claim 1, further comprising alerting a user of one or more abnormal flight characteristics of at least one of the plurality of aircraft if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

5. (Original): The method of claim 1, further comprising increasing the alert condition when at least one of the flight characteristics deviates from a predetermined value of at least one of the normal flight characteristics.
6. (Original): The method of claim 1, further comprising increasing the alert condition to a selected level when at least one of the flight characteristics deviates from a predetermined value of at least one of the normal flight characteristics.
7. (Original): The method of claim 6, wherein the selected level of the alert condition is determined by the predetermined value of the at least one of the normal flight characteristics that has been deviated from.
8. (Original): The method of claim 1, further comprising increasing the alert condition to a first selected level when at least one of the flight characteristics deviates from a first predetermined value of at least one of the normal flight characteristics or increasing the alert condition to a second selected level when at least one of the flight characteristics deviates from a second predetermined value of at least one of the normal flight characteristics.
9. (Currently Amended): The method of claim 1, further comprising visually reporting the alert condition of at least one of the plurality of aircraft.
10. (Currently Amended): The method of claim 1, further comprising reporting the alert condition of at least one of the plurality of aircraft on a display.
11. (Currently Amended): The method of claim 1, further comprising defining a proximity alert volume around at least one of the plurality of aircraft.
12. (Original): The method of claim 11, further comprising providing an alarm if another aircraft enters the proximity alert volume.

13. (Original): The method of claim 11, further comprising increasing boundary conditions of the proximity alert volume if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

14. (Currently Amended): The method of claim 1, further comprising defining a boundary of an area, wherein the area is an area in which at least one of the plurality of aircraft is restricted from traveling.

15. (Currently Amended): The method of claim 14, further comprising providing an alarm if at least one of the plurality of aircraft crosses the area boundary.

16. (Original): The method of claim 14, further comprising increasing boundary conditions of the area boundary if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

17. (Currently Amended): The method of claim 1, further comprising defining an exclusive area for at least one of the plurality of aircraft.

18. (Currently Amended): The method of claim 17, further comprising providing an alarm if at least one of the plurality of aircraft enters the exclusive area.

19. (Original): The method of claim 17, further comprising increasing boundary conditions of the exclusive area if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

20. (Original): The method of claim 1, further comprising modifying one or more of the flight characteristics if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

21. (Currently Amended): The method of claim 1, further comprising modifying at least one of the normal flight characteristics based on a flight phase of at least one of the plurality of aircraft.

22. (Currently Amended): The method of claim 21, wherein the flight phase comprises a takeoff of at least one of the plurality of aircraft.

23. (Currently Amended): The method of claim 21, wherein the flight phase comprises at least one of the plurality of aircraft enroute.

24. (Currently Amended): The method of claim 21, wherein the flight phase comprises an approach of at least one of the plurality of aircraft.

25. (Currently Amended): The method of claim 21, wherein the flight phase comprises a landing of at least one of the plurality of aircraft.

26. (Currently Amended): The method of claim 1, wherein at least one of the flight characteristics comprises a horizontal velocity of at least one of the plurality of aircraft.

27. (Currently Amended): The method of claim 1, wherein at least one of the flight characteristics comprises a vertical velocity of at least one of the plurality of aircraft.

28. (Currently Amended): The method of claim 1, wherein at least one of the flight characteristics comprises a rate of heading change of at least one of the plurality of aircraft.

29. (Currently Amended): The method of claim 1, wherein at least one of the flight characteristics comprises an altitude of at least one of the plurality of aircraft.

30. (Currently Amended): The method of claim 1, wherein at least one of the flight characteristics comprises a speed change of at least one of the plurality of aircraft.

31. (Currently Amended): The method of claim 1, wherein at least one of the flight characteristics comprises a heading of at least one of the plurality of aircraft.

32. (Currently Amended): The method of claim 1, wherein at least one of the flight characteristics comprises an IFF signal of at least one of the plurality of aircraft.

33. (Currently Amended): The method of claim 1, wherein at least one of the flight characteristics comprises route deviation distance of at least one of the plurality of aircraft.

34. (Currently Amended): The method of claim 1, wherein at least one of the flight characteristics comprises route deviation angle of at least one of the plurality of aircraft.

35. (Currently Amended): A method for detecting and reporting a state of ~~an~~ a plurality of aircraft using a computer system, comprising:

monitoring one or more flight characteristics of the plurality of aircraft with the computer system, wherein the computer system is remotely located from the plurality of aircraft;

assessing a dynamic state of at least one of the plurality of aircraft from the one or more flight characteristics with the computer system;

comparing the dynamic state of at least one of the plurality of aircraft to a normal dynamic state for the aircraft with the computer system; and

modifying one or more boundary conditions of an alert for at least one of the plurality of aircraft if at least one of the flight characteristics of the dynamic state of the aircraft deviates from a predetermined value of at least one normal flight characteristic of the normal dynamic state with the computer system.

36. (Currently Amended): The method of claim 35, further comprising defining one or more normal boundary conditions of the alert corresponding to the normal dynamic state of at least one of the plurality of aircraft.

37. (Currently Amended): The method of claim 35, further comprising increasing at least one of the boundary conditions of the alert for at least one of the plurality of aircraft if at least one flight characteristic of the dynamic state of the aircraft deviates from a predetermined value of at least one of the normal flight characteristics of the normal dynamic state.

38. (Original): The method of claim 35, wherein the alert comprises a proximity alert.

39. (Original): The method of claim 35, wherein the alert comprises a boundary alert.

40. (Original): The method of claim 35, wherein the alert comprises an exclusive area alert.

41. (Original): The method of claim 35, further comprising reporting a result of the comparison.

42. (Original): The method of claim 35, further comprising visually reporting a result of the comparison.

43. (Original): The method of claim 35, further comprising visually reporting a modification in at least one of the boundary conditions.

44. (Currently Amended): The method of claim 35, further comprising changing an alert condition of at least one of the plurality of aircraft if at least one of the flight characteristics of the dynamic state of the aircraft deviates from a predetermined value of at least one of the normal flight characteristics of the normal dynamic state.

45. (Currently Amended): The method of claim 35, further comprising increasing an alert condition of at least one of the plurality of aircraft if at least one of the flight

characteristics of the dynamic state of the aircraft deviates from a predetermined value of at least one of the normal flight characteristics of the normal dynamic state.

46. (Currently Amended): The method of claim 35, further comprising reporting an alert condition of at least one of the plurality of aircraft.

47. (Original): The method of claim 35, further comprising providing an alarm when at least one of the boundary conditions of the alert is crossed.

48. (Currently Amended): The method of claim 35, further comprising alerting a user of an abnormal dynamic state if at least one of the flight characteristics of the dynamic state of at least one of the plurality of aircraft deviates from a predetermined value of at least one of the normal flight characteristics of the normal dynamic state.

49. (Currently Amended): The method of claim 35, further comprising modifying one or more of the flight characteristics if at least one of the flight characteristics of the dynamic state of at least one of the plurality of aircraft deviates from a predetermined value of at least one of the normal flight characteristics of the normal dynamic state.

50. (Currently Amended): The method of claim 35, further comprising modifying at least one predetermined value of at least one of the normal flight characteristics of the normal dynamic state based on a flight phase of at least one of the plurality of aircraft.

51. (Currently Amended): The method of claim 50, wherein the flight phase comprises a takeoff of at least one of the plurality of aircraft.

52. (Currently Amended): The method of claim 50, wherein the flight phase comprises at least one of the plurality of aircraft enroute.

53. (Currently Amended): The method of claim 50, wherein the flight phase comprises an approach of at least one of the plurality of aircraft.

54. (Currently Amended): The method of claim 50, wherein the flight phase comprises a landing of at least one of the plurality of aircraft.

55. (Currently Amended): The method of claim 35, wherein at least one of the flight characteristics comprises a horizontal velocity of at least one of the plurality of aircraft.

56. (Currently Amended): The method of claim 35, wherein at least one of the flight characteristics comprises a vertical velocity of at least one of the plurality of aircraft.

57. (Currently Amended): The method of claim 35, wherein at least one of the flight characteristics comprises a rate of heading change of at least one of the plurality of aircraft.

58. (Currently Amended): The method of claim 35, wherein at least one of the flight characteristics comprises an altitude of at least one of the plurality of aircraft.

59. (Currently Amended): The method of claim 35, wherein at least one of the flight characteristics comprises a speed change of at least one of the plurality of aircraft.

60. (Currently Amended): The method of claim 35, wherein at least one of the flight characteristics comprises a heading of at least one of the plurality of aircraft.

61. (Currently Amended): The method of claim 35, wherein at least one of the flight characteristics comprises an IFF signal of at least one of the plurality of aircraft.

62. (Currently Amended): The method of claim 35, wherein at least one of the flight characteristics comprises route deviation distance of at least one of the plurality of aircraft.

63. (Currently Amended): The method of claim 35, wherein at least one of the flight characteristics comprises route deviation angle of at least one of the plurality of aircraft.

64. (Currently Amended): A method for detecting and reporting ~~an~~ in-flight alert conditions of ~~an~~ a plurality of aircraft using an earthbound computer system, comprising:

monitoring one or more flight characteristics of the plurality of aircraft with the earthbound computer system;

assessing one or more normal flight characteristics of at least one of the plurality of aircraft based on a flight phase of the aircraft with the earthbound computer system;

comparing at least one of the flight characteristics to one or more of the normal flight characteristics to assess an alert condition of at least one of the plurality of aircraft with the earthbound computer system; and

reporting the alert condition of at least one of the aircraft with the earthbound computer system.

65. (Currently Amended): The method of claim 64, wherein the alert condition comprises an alert level for at least one of the plurality of aircraft corresponding to a danger level or threat level for the aircraft based on at least one of the flight characteristics.

66. (Original): The method of claim 64, further comprising changing the alert condition when at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

67. (Currently Amended): The method of claim 64, further comprising alerting a user of abnormal flight characteristics of at least one of the plurality of aircraft if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

68. (Original): The method of claim 64, further comprising increasing the alert condition when at least one of the flight characteristics deviates from a predetermined value of at least one of the normal flight characteristics.

69. (Original): The method of claim 64, further comprising increasing the alert condition to a selected level when at least one of the flight characteristics deviates from a predetermined value of at least one of the normal flight characteristics.

70. (Original): The method of claim 69, wherein the selected level of the alert condition is determined by the predetermined value of the at least one of the normal flight characteristics that has been exceeded.

71. (Original): The method of claim 64, further comprising increasing the alert condition to a first selected level when at least one of the flight characteristics deviates from a first predetermined value of at least one of the normal flight characteristics or increasing the alert condition to a second selected level when at least one of the flight characteristics deviates from a second predetermined value of at least one of the normal flight characteristics.

72. (Currently Amended): The method of claim 64, further comprising visually reporting the alert condition of at least one of the plurality of aircraft.

73. (Currently Amended): The method of claim 64, further comprising reporting the alert condition of at least one of the plurality of aircraft on a display.

74. (Currently Amended): The method of claim 64, further comprising defining a proximity alert volume around at least one of the plurality of aircraft.

75. (Original): The method of claim 74, further comprising providing an alarm if another aircraft enters the proximity alert volume.

76. (Original): The method of claim 74, further comprising increasing boundary conditions of the proximity alert volume if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

77. (Currently Amended): The method of claim 64, further comprising defining a boundary of an area, wherein the area is an area in which at least one of the plurality of aircraft is restricted from traveling.

78. (Currently Amended): The method of claim 77, further comprising providing an alarm if at least one of the plurality of aircraft crosses the area boundary.

79. (Original): The method of claim 77, further comprising increasing boundary conditions of the area boundary if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

80. (Currently Amended): The method of claim 64, further comprising defining an exclusive area for at least one of the plurality of aircraft.

81. (Currently Amended): The method of claim 80, further comprising providing an alarm if at least one of the plurality of aircraft enters the exclusive area.

82. (Original): The method of claim 80, further comprising increasing boundary conditions of the exclusive area if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

83. (Original): The method of claim 64, further comprising modifying one or more of the flight characteristics if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

84. (Currently Amended): The method of claim 64, wherein the flight phase comprises a takeoff of at least one of the plurality of aircraft.

85. (Currently Amended): The method of claim 64, wherein the flight phase comprises at least one of the plurality of aircraft enroute.

86. (Currently Amended): The method of claim 64, wherein the flight phase comprises an approach of at least one of the plurality of aircraft.

87. (Currently Amended): The method of claim 64, wherein the flight phase comprises a landing of at least one of the plurality of aircraft.

88. (Currently Amended): The method of claim 64, wherein at least one of the flight characteristics comprises a horizontal velocity of at least one of the plurality of aircraft.

89. (Currently Amended): The method of claim 64, wherein at least one of the flight characteristics comprises a vertical velocity of at least one of the plurality of aircraft.

90. (Currently Amended): The method of claim 64, wherein at least one of the flight characteristics comprises a rate of heading change of at least one of the plurality of aircraft.

91. (Currently Amended): The method of claim 64, wherein at least one of the flight characteristics comprises an altitude of at least one of the plurality of aircraft.

92. (Currently Amended): The method of claim 64, wherein at least one of the flight characteristics comprises a speed change of at least one of the plurality of aircraft.

93. (Currently Amended): The method of claim 64, wherein at least one of the flight characteristics comprises a heading of at least one of the plurality of aircraft.

94. (Currently Amended): The method of claim 64, wherein at least one of the flight characteristics comprises an IFF signal of at least one of the plurality of aircraft.

95. (Currently Amended): The method of claim 64, wherein at least one of the flight characteristics comprises route deviation distance of at least one of the plurality of aircraft.

96. (Currently Amended): The method of claim 64, wherein at least one of the flight characteristics comprises route deviation angle of at least one of the plurality of aircraft.

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